REMARKS/ARGUMENTS

Applicants appreciate the thorough examination of the present application, as evidenced by the first Official Action. The Official Action rejects to Claim 1, and rejects Claims 8-10, 12-18, 24 and 25 under 35 U.S.C. § 112, second paragraph, as including a number of informalities. The Official Action rejects Claims 12, 13, 17-20, 24, 26, 27, 29-30, 34, 36 and 37 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2005/0086318 to Aubault. The Official Action then rejects Claims 1, 2, 8-11, 28 and 38 under 35 U.S.C. § 103(a) as being unpatentable over Aubault, in view of U.S. Patent No. 6,157,982 to Deo; and reject the remaining claims, namely Claims 14-16, 21-23, 25, 31-33 and 35 as being unpatentable over Aubault, in view of U.S. Patent No. 6,449,695 to Bereznyi.

In response, Applicants have amended various ones of the claims to more clearly define the claimed invention, as well as to address the aforementioned informality rejections. In addition, Applicants have added new independent Claim 39 to recite further patentable aspects of the present invention. In view of these amendments, Applicants respectfully submit that the rejection of Claim 1, 8-10, 12-18, 24 and 25 under 35 U.S.C. § 112, second paragraph, is overcome. As explained below, Applicants also respectfully submit that the claimed invention is patentably distinct from Aubault, Deo and Bereznyi, taken individually or in combination. In view of the amended and newly added claims, and the remarks presented herein, Applicants respectfully request reconsideration and allowance of all of the pending claims of the present application.

A.   Claims 12, 13, 17-20, 24, 26, 27, 29-30, 34, 36 and 37 are Patentable

Briefly, Aubault discloses a system and method for transmitting objects between a server and a client terminal using a cache management. As disclosed, the client terminal maintains a cache memory for storing objects transmitted by the server. The system further includes, upstream of the client terminal, such as in the server or an intermediate proxy server, management of a list of objects present in the cache memory of the respective client terminal. By managing the list upstream of the client terminal, Aubault purports to limit exchange of data concerning the content of the cache memory between the client terminal and the server.

As further disclosed by Aubault, on receiving an object from the server, the client terminal may store the object in the cache memory if a filling ratio of the cache memory is below a threshold. If the filling ratio is above the threshold, however, the terminal evaluates relevance criterion for the received object. Then, if the cache memory includes objects with relevance criterion lower than that of the received object, the terminal deletes the less relevant object from the cache memory and replaces it with the received object. Otherwise, if the cache memory does not include a less relevant object, the client terminal rejects the received object.

Amended independent Claim 12 recites a terminal for controlling storage of content in memory. As recited, the terminal includes a memory and a controller. The memory is configured to store at least one piece of content, each of which is associated with parameters including a client expiration time and a deletion priority value. The controller, then, is configured to send a status of the piece(s) of content stored in memory to a network entity located remote from the terminal. In this regard, the network entity (to which the status is sent) is configured to at least partially control storage of the piece(s) of content in memory of the terminal based upon the status and the associated parameters.

1.   *Client Expiration Time and Deletion Priority Value*

In contrast to amended independent Claim 12, Aubault does not teach or suggest content associated with multiple parameters including a client expiration time and a deletion priority value, and controlling storage of that content based on those parameters. The Official Action alleges that the relevance criterion disclosed by Aubault corresponds to a deletion priority value. Even presuming the accuracy of such an allegation (although expressly not admitted), however, Aubault still does not teach or suggest associating content with multiple parameters including not only a deletion priority value, but also a client expiration value; and controlling storage of content based on those multiple parameters, similar to amended independent Claim 1.

In addressing dependent Claim 14, the Official Action appears to concede that Aubault does not teach or suggest content associated with a client expiration time. The Official Action nonetheless alleges that Bereznyi discloses this feature, and that it would have been obvious to one skilled in the art to modify Aubault to include it to thereby teach the claimed invention. As

motivation, the Official Action alleges that adding a client expiration time to the Aubault system and method would "give Aubault's system more flexibility on how it manages the terminal's memory." Official Action of Feb. 5, 2007, page 11. Applicants respectfully disagree and submit that even if Aubault and Bereznyi did disclose respective elements of amended independent Claim 12 (although expressly not admitted), one skilled in the art would not have been motivated to combine their teachings to disclose the claimed invention.

Aubault discloses a cache management system and method that bases maintenance of objects in cache memory of a client terminal on the relevance of those objects to a user of that client terminal. As disclosed, the system and method is directed to a server sending, to a client terminal, information for real-time display of a scene or video having some spatial relationship to the client terminal, or rather a user of the client terminal. The server sends objects to the client at least partially based on display information including information such as the position and/or observation direction of the user. Similarly, the client terminal accepts and stores objects, at times to the expense of deleting already stored objects, based on the relevance of those objects to the client terminal, or rather the client terminal user. As such, the client terminal may determine that an object stored in the cache memory is visually less relevant than an object received from the server; and in turn, replace the less-relevant, stored object with the more-relevant, received object. And as disclosed, the visual relevance of an object may be determined based on the distance of the respective object from the user, and/or the location of the object relative to the observation direction and/or field of view of the user.

Aubault therefore discloses a system and method that bases object transmission and storage on the visual relevance of that object to the user of the client terminal to which the object is transmitted. Thus, even if adding an expiration time component to the objects transmitted to and stored by the client terminal would increase the flexibility by which the cache memory is controlled, Applicants respectfully submit that one skilled in the art would not modify Aubault to include such a component. In this regard, Aubault itself makes clear that the transmission and storage of objects are based on the visual relevance of those objects to the user, regardless of the time at which those objects are transmitted or stored, similar to the manner allegedly disclosed by Bereznyi. Even further evidencing the visual relevance of an object, Aubault explicitly

discloses that the client terminal rejects objects whose visual relevance is less than all of the objects stored in the cache memory (provided the fill ratio of the cache memory is above a threshold). Clearly, should the Aubault system manage its cache memory based on an expiration time, newly transmitted objects would take precedence over already stored objects. But such a modification would change the principle of operation of Aubault in favoring more visually-relevant, stored objects over less visually-relevant, received objects. And as stated in MPEP § 2143.01, "[a] proposed modification cannot change the principle of operation of a reference" to support a § 103 rejection.

Thus, and for at least the foregoing reasons, Applicants respectfully again submit that even if Aubault and Bereznyi did disclose respective elements of amended independent Claim 12 (although expressly not admitted), one skilled in the art would not have been motivated to combine their teachings to disclose the claimed invention.

2.   *Sending a Status of Stored Content to Remote Network Entity*

In further contrast to amended independent Claim 12, Aubault does not teach or suggest <u>a terminal sending a status of content stored in memory to a remote network entity, the network entity being configured to control storage of content in memory of the terminal based on the status and parameters associated with the content</u>. In fact, in addressing independent Claim 1, the Official Action concedes that Aubault does not teach or suggest a remote network entity controlling the storage of content by a terminal. The Official Action nonetheless alleges that Deo discloses this feature, and that it would have been obvious to one skilled in the art to modify Aubault to include it to thereby teach the claimed invention. Applicants respectfully disagree, and further address the combination of Aubault and Deo below with respect to amended independent Claim 1.

Applicants do note that the Official Action alleges that Aubault discloses a terminal sending a status of content stored in memory to a remote network entity, and the controlling of content stored by the terminal based on that status. For this feature of the claimed invention, the Official Action cites paragraphs 0053-0054 of Aubault for disclosing the server requesting, and receiving, the state of contents of the cache memory; as well as the server receiving, during an

initialization phase, initial display information. In neither instance, however, does Aubault teach or suggest that the storage of content stored by the cache memory is controlled based on either the state of the cache memory contents, or the initial display information, similar to the status of stored content of amended independent Claim 12. Further, as to the server receiving the state of the contents of the cache memory, Applicants note that in contrast to amended independent Claim 12, <u>Aubault does not teach or suggest that the state of the contents of the cache memory is sent from the terminal to the server</u>. Rather, Aubault quite clearly discloses that the state information is sent from a proxy server located between the server and the client.

Applicants therefore respectfully submit that amended independent Claim 12, and by dependency Claims 13-18, is patentably distinct from Aubault. Amended independent Claims 1, 19 and 29, and new independent Claim 39, recite subject matter similar to that of amended independent Claim 12, including the aforementioned controlling storage of content at a terminal based on multiple parameters associated with the content, and the controlling storage of content from a network entity located remote from the terminal. Thus, Applicants also respectfully submit that amended independent Claims 1, 19 and 29, and by dependency Claims 2-11, 20-28 and 30-38, are also patentably distinct from Aubault for at least the reasons given above with respect to amended independent Claim 12.

For at least the foregoing reasons, Applicants respectfully submit that the rejection of Claims 12, 13, 17-20, 24, 26, 27, 29-30, 34, 36 and 37 as being anticipated by Aubault is overcome.

B. Claims 1, 2, 8-11, 28 and 38 are Patentable

As indicated above, the first Official Action rejects Claims 1, 2, 8-11, 28 and 38 as being unpatentable over Aubault in view of Deo. Amended independent Claim 1 recites a system of controlling storage of content in memory. As recited, the system includes a network entity comprising an expiration control application configured to receive a status of at least one piece of content stored in memory of a terminal located remote from the nework entity. Each piece of content is associated with parameters including a client expiration time and a deletion priority value. The network entity is therefore also configured to at least partially control storage of

content in memory of the terminal based upon the status and the associated parameters.

1. Client Expiration Time and Deletion Priority Value

In contrast to amended independent Claim 1, and as explained above with respect to amended independent Claim 12, Aubault does not teach or suggest <u>content associated with multiple parameters including a client expiration time and a deletion priority value, and controlling storage of that content based on those parameters</u>. Applicants also respectfully submit that Deo does not teach or suggest this feature of amended independent Claim 1. As neither Aubault nor Deo individually teach or suggest this feature of amended independent Claim 1, the combination of Aubault and Deo likewise does not teach or suggest this feature.

Again, with respect to dependent Claim 14, the Official Action appears to concede that Aubault does not teach or suggest content associated with a client expiration time. The Official Action nonetheless alleges that Bereznyi discloses this feature, and that it would have been obvious to one skilled in the art to modify Aubault to include it to thereby teach the claimed invention. As explained above with respect to amended independent Claim 12, Applicants respectfully disagree, and submit that even if Aubault and Bereznyi did disclose respective elements of the claimed invention (although expressly not admitted), one skilled in the art would not have been motivated to combine their teachings to disclose the claimed invention.

2. Sending a Status of Stored Content to Remote Network Entity

In further contrast to amended independent Claim 1, and again as explained above with respect to amended independent Claim 12, Aubault does not teach or suggest <u>a terminal sending, or rather a remote network entity receiving, a status of content stored in memory of the terminal, the network entity being configured to control storage of content in memory of the terminal based on the status and parameters associated with the content</u>. In fact, in addressing independent Claim 1, the Official Action concedes that Aubault does not teach or suggest a remote network entity controlling the storage of content by a terminal. The Official Action nonetheless alleges that Deo discloses this feature, and that it would have been obvious to one skilled in the art to modify Aubault to include it to thereby teach the claimed invention.

Applicants respectfully disagree.

Briefly, Deo discloses a system and method for remotely managing memory in a portable information device from an external computer. As disclosed, the device memory is mapped into a portion of the computer memory to create a virtual device memory therein. To effectuate a change in the device memory, then, a user enters programming changes to be made to the information device. The programming changes alter the virtual device memory within the computer memory, and a memory manager resident in the computer determines what memory transactions are effective to alter the virtual device memory. The computer generates a serial stream of data indicative of memory transactions to effectuate a corresponding alteration of the device memory, and the data is transmitted to the information device to carry out the respective memory transactions and update the device memory.

Like Aubault, and in contrast to amended independent Claim 1, Deo also does not teach or suggest a terminal sending a status of content stored in its memory to a remote network entity for controlling the storage of content based on that status. In fact, Deo does not teach or suggest its portable information device sending any information related to its memory to its external computer, much less status information for content stored in its memory. Instead, as explained above, Deo discloses that its external computer stores a virtual device memory that maps to the portable information device. Changes to the memory of the portable information device, then, are initiated by a user via the external computer and the virtual memory device, and then proceed to the portable information device to be carried out therein. In contrast, amended independent Claim 1 recites the terminal sending the status of content stored in its memory for controlling the storage of such content.

As neither Aubault nor Deo individually teach or suggest the status sending feature of amended independent Claim 1, the combination of Aubault and Deo likewise does not teach or suggest this feature. Applicants therefore respectfully submit that amended independent Claim 1, and by dependency Claims 2-11, is patentably distinct from Aubault and Deo, taken individually or in combination. Amended independent Claims 12, 19 and 29, and new independent Claim 39, recite subject matter similar to that of amended independent Claim 1, including the aforementioned controlling storage of content at a terminal based on multiple

parameters associated with the content, and the controlling storage of content from a network entity located remote from the terminal. Thus, Applicants also respectfully submit that amended independent Claims 12, 19 and 29, and by dependency Claims 13-18, 20-28 and 30-38, are also patentably distinct from Aubault and Deo, taken individually or in combination, for at least the reasons given above with respect to amended independent Claim 1.

For at least the foregoing reasons, Applicants respectfully submit that the rejection of Claims 1, 2, 8-11, 28 and 38 as being unpatentable over Aubault in view of Deo is overcome.

C.   *Claims 14-16, 21-23, 25, 31-33 and 35 are Patentable*

Finally, the Official Action rejects Claims 14-16, 21-23, 25, 31-33 and 35 as being unpatentable over Aubault, in view of Bereznyi. Dependent Claim 14 (and similarly dependent Claims 21 and 31) further recites deletion of content having a highest deletion priority value from those piece(s) of content having an exceeded client expiration time. And dependent Claim 25 (and similarly dependent Claim 35) further recites that the parameters include a server expiration time (as well as a client expiration time), and that content with an exceeded server expiration time may be deleted from the network entity that also sends content to the terminal.

For at least the reasons given above, as well as a number of additional reasons, Applicants respectfully submit that the claimed invention is patentably distinct from Aubault, Bereznyi and Deo, taken individually or in any proper combination.

1.   *Client Expiration Time and Deletion Priority Value*

In contrast to amended independent Claims 12, 19 and 29, and by dependency Claims 14-16, 21-23, 25, 31-33 and 35, and as explained above, Aubault (as well as Deo) does not teach or suggest <u>content associated with multiple parameters including a client expiration time and a deletion priority value, and controlling storage of that content based on those parameters</u>. As also explained above, even if Bereznyi did disclose a client expiration time (although, again, expressly not admitted), one skilled in the art would not have been motivated to combine their teachings to disclose the claimed invention.

(a) Dependent Claims 14-16, 21-23 and 31-33

Moreover, and particularly as to dependent Claims 14-16, 21-23 and 31-33, Applicants respectfully submit that even if one skilled in the art were motivated to modify Aubault to include an expiration time as allegedly disclosed by Bereznyi, nothing in Aubault, Bereznyi or any other prior art or general knowledge of those skilled in the art suggests the claimed invention. That is, nothing suggests that one skilled in the art modify Aubault per Bereznyi to combine application of the two parameters such that piece(s) content are deleted based on those piece(s) content having the lowest relevance from among piece(s) of content exceeding their respective expiration time(s). Rather, at best, one could argue that the combination of Aubault and Bereznyi teach the separate deletion of less relevant objects, as necessary, and the additional deletion of older objects whose expiration time has been exceeded. Dependent Claims 14-16, 21-23 and 31-33, on the other hand, recite deletion of content with a higher deletion priority from among that content whose client expiration time has been exceeded.

(b) Dependent Claims 25 and 35

Further as to dependent Claims 25 and 35, Applicants note that the Official Action cites the same portion of Bereznyi to support disclosure of a client expiration time and a server expiration time. Applicants respectfully submit, however, that even if Bereznyi does disclose an expiration time for the deletion of content from a cache, Bereznyi does not teach or suggest multiple expiration times associated with a piece of content. That is, Bereznyi does not teach or suggest both a client expiration time (from which content may be deleted from memory of a terminal), and a server expiration time (from which content may be deleted from the network entity that sends the content to the terminal), as recited by dependent Claims 25 and 35.

2. Sending a Status of Stored Content to Remote Network Entity

In contrast to amended independent Claims 12, 19 and 29, and by dependency Claims 14-16, 21-23, 25, 31-33 and 35, and as explained above, Aubault (as well as Deo) does not teach or suggest a <u>terminal sending, or rather a remote network entity receiving, a status of content stored</u>

in memory of the terminal, the network entity being configured to control storage of content in memory of the terminal based on the status and parameters associated with the content. Applicants also respectfully submit that Bereznyi does not teach or suggest this feature of the claimed invention. Bereznyi instead discloses a number of cache memories, each of which is associated with a local cache controller for controlling the storage of content in a respective cache memory. And although one could argue that the cache controller controls storage based on a status of the respective content, the cache controller does not send or receive that status to or from a remote network entity for that remote network entity to control the storage of content in its cache memory.

Applicants therefore respectfully submit that none of Aubault, Deo or Bereznyi individually teach or suggest the status sending feature of the claimed invention. And accordingly, no combination of Aubault, Deo and Bereznyi likewise teaches or suggest this feature of the claimed invention.

For at least the foregoing reasons, Applicants respectfully submit that the rejection of Claims 14-16, 21-23, 25, 31-33 and 35 as being unpatentable over Aubault in view of Bereznyi is overcome.

CONCLUSION

In view of the amended and newly added claims and the remarks presented above, Applicants respectfully submit that the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact Applicants' undersigned attorney in order to resolve any remaining issues.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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